

Baker Creek & 56th Street Project

Pere Marquette River Watershed

September 2012



**Conservation
Resource Alliance**

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Project Cost:
\$162,128 incl. match

Contributors:

- US Forest Service
American Recovery & Reinvestment Act
- US Fish and Wildlife
Service Fish Passage Program
- Lake County Road Commission
- Pere Marquette Watershed Council
- Great Lakes Fish & Wildlife Restoration Act
- Great Lakes Restoration Initiative

Partners involved:

Pere Marquette River Restoration Committee including the following partners – US Forest Service, US Fish and Wildlife Service, Conservation Resource Alliance, Lake County Road Commission, Wilcox Professional Services, Michigan Department of Natural Resources, Michigan Department of Environmental Quality, McDowell Construction, & Pere Marquette River Watershed Council.

The Pere Marquette River is a state designated Natural River and Blue Ribbon Trout Stream, and a federally designated Wild and Scenic River. The Middle Branch is a main tributary in the headwaters of the Pere Marquette River. The Middle Branch has the coldest water temperatures and the most gravel beds of the 3rd order tributaries to the Pere Marquette mainstem. Baker Creek is the longest tributary to the Middle Branch, and flows through wetland and forest. Baker Creek is home to brook, brown and rainbow trout, and sculpin.

In August of 2011, the road crossing #L-51 where Baker Creek crosses 56th Street a second time completely failed. A high water event during which the area received 6 inches of rain in a 12 hour period, combined with woody debris getting lodged in the site's 36" diameter culvert caused the road crossing to wash out. Lake County Road Commission estimated that 150 cubic yards of material washed into Baker Creek and the Middle Branch from the failure event. Prior to the wash-out, the culvert at 56th Street was undersized and perched thus blocking the movement of most aquatic organisms between Baker Creek and the Middle Branch.

A bottomless arch constructed at the crossing in 2012 now provides for fish passage, high flows, woody debris movement, and a natural stream bottom.

Location

**Yates Township Section 3
Lake County, MI
N43.887625, W85.732627**



Best Management Practices:

- Replacement of 48" dia. culvert with aluminum bottomless arch 16'2" wide, 5'1" high, 45' long w/wingwalls
- Pave & curb 1,600 lineal feet of approaches (26' wide roadway)
- 6 spillways
- Guardrail installation
- Fieldstone placement, topsoil, mulch blanket & revegetation

Project Benefits:

- Natural movement of woody debris, substrate, fish & aquatic insects.
- Reconnect 2 miles of Baker Creek with the Middle Branch of the PM.
- Reduce sedimentation of stream from erosion of steep road approaches into Baker Creek. Up to 3 tons annually and up to 150 tons during the road failure in 2011.

Baker Creek and 56th Street Crossing Site #L-51

Inlet "before"



Inlet "after"



Outlet "before"



Outlet "after"



The road crossing failed during the August 2011 flood event & deposited sediment & gravel downstream.



Baker Creek and 56th Street Crossing Site #L-51

During construction of the new bottomless arch structure.



Road approaches continuously washed into the stream. Paving helps route runoff away from the stream.



Upstream of crossing w/remnants of a dam “before”



Upstream of crossing “after”

